

Notice of Allowability

Application No.

10/044,230

Examiner

Marceau Milord

Applicant(s)

KOORAPATY ET AL.

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01-10-2002.
2. ☒ The allowed claim(s) is/are 1-27.
3. ☒ The drawings filed on 10 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 7-28-2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 20, 21, 25, the prior art and Sugiura et al (US Patent No 6362783 B1) and Rudrapatna et al (US Patent No 6052598) and Kingdon et al (US Patent No 6138003) either alone or in combination failed to teach a method of estimating a position of a mobile terminal operating in a coverage area of a radio telecommunications network having a plurality of base station transceivers and a plurality of service sectors, said method comprising the steps of: storing the expected RSS values at a plurality of locations in a database with an indicator for each location indicating whether each stored value is a predicted value or a measured value, said storing step including: storing in the database, for each service sector, a first expected measurement variance for all locations in the database that are populated with measured values; and storing in the database, for each service sector, a second expected measurement variance for all locations in the database that are populated with predicted values; obtaining, by the mobile terminal for which the position is to be estimated, RSS measurements of signals transmitted by the base station transceivers; weighting the RSS measurements obtained by the mobile terminal with the first expected measurement variance for locations in the database that are populated with measured values; weighting the RSS measurements obtained by the mobile terminal with the second expected measurement variance for locations in the database that are populated with predicted values; and comparing the weighted RSS measurements with the expected RSS values stored in the database; estimating the position of the mobile terminal based on differences between the weighted RSS measurements and the expected RSS values, said estimating step comprising: determining whether the percentage of locations being considered in the database

Art Unit: 2682

that are populated with measured values exceeds a predefined threshold; utilizing an estimator based on a maximum likelihood criterion to estimate the position, upon determining that the percentage of locations being considered in the database that are populated with measured values exceeds the predefined threshold; and utilizing an estimator based on a minimum-mean square-error criterion to estimate the position, upon determining that the percentage of locations being considered in the database that are populated with measured values does not exceed the predefined threshold.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 703-306-3023. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MARCEAU MILORD


MARCEAU MILORD
PRIMARY EXAMINER

Marceau Milord

Examiner

Art Unit 2682